

DISCUSSION OF THE AMENDMENT

Due to the length of the specification herein, Applicants will cite to the paragraph number of the published patent application (PG Pub) of the present application, i.e., US 2007/0185270, when discussing the application description, both in this section and in the Remarks section, *infra*, rather than to page and line of the specification as filed.

The specification has been amended to indicate that Example G is a comparative example, as can be verified by the fact that the elastomer particle content is below the presently-recited of 30%.

Claim 20 has been amended by deleting a superfluous limitation with regard to an outer layer, since this limitation relates to the non-elected embodiment of, for example, Claim 30, and as described in the specification at paragraphs [0014] and [0018]. Claim 20 has been further amended by deleting superfluous language, by inserting that the molding is obtained from the recited composition, by replacing the term “composed of” with --comprising--, and by inserting prefixes (1) and (2) to further set forth the components of the composition used for making the claimed molding.

Claims 23 and 35 have been amended to be consistent with the above-discussed amendment to Claim 20. Claims 24-29 have each been amended by deleting “or film.” In addition, Claim 27 has been further amended to recite that the molding is in the form of a film. Claim 28 has been further amended by inserting the term --comprising--, and by deleting the term “by means of.” Claim 29 has been further amended by replacing “of using” with --comprising forming--.

New Claims 39 and 40 have been added, as supported in the specification at paragraphs [0039] and [0040], respectively.

Application No. 10/590,932
Reply to Office Action of September 3, 2009

No new matter is believed to have been added by the above amendment. Claims 20-29, 35 and 39-40 remain active in the application. Claims 30-34 and 36-38 remain withdrawn from consideration.

REMARKS

The rejection of Claims 21-29 under 35 U.S.C. § 103(a) as unpatentable over US 2004/0086721 (Bonnet et al), is respectfully traversed.

As recited in above-amended Claim 20, an embodiment of the active claims is a molding **having a material thickness of at least 150 μm** , and obtained from a composition comprising a polymer mixture comprising (1) an impact-modified poly(meth)acrylate polymer which is a poly(meth)acrylate matrix with elastomer particles distributed therein, and (2) a fluoropolymer, the proportion of the fluoropolymer in the mixture being from 30 to 95% by weight, wherein

the impact-modified poly(meth)acrylate polymer consists of from 20 to 70% by weight of the poly(meth)acrylate matrix and from 80 to 30% by weight of the elastomer particles.

(Emphasis added.)

As described in the specification beginning at paragraph [0009], individual and composite films of the prior art, especially those which consist of fluoropolymers in a mixture with impact-modified poly(meth)acrylates, have excellent properties but run into undesired embrittlement, compared to thinner films, when the material thickness of the films reaches 150 μm or more. Applicants are able to successfully address this problem by the above-emphasized limitation of the present claims wherein the impact-modified poly(meth)acrylate polymer consists of at least 30% by weight of elastomer particles.

The significance of both the minimum thickness and the minimum amount of elastomer particles is demonstrated by the comparative data in the specification. Films of various compositions and thicknesses were formed, and were tested for various properties as shown in the table at paragraph [0121] of the specification, reproduced below:

Ex.	Fractions [% by weight]				Elongation at break without thermal stress [%]	Elongation at break after 10 days at 60°C [%]	Ratio of after/without thermal stress [%]
	PMMA [%]	PVDF [%]	Film thickness [μm]	Elastomer particle content of the PMMA fraction [%]			
A	30	70	500	6 5	262	177	68
A-Comp.	30	70	500	0	293	14	5
B	30	70	250	65	299	292	98
B-Comp.	30	70	250	0	442	7	2
C-Comp.	30	70	50	65	355	305	86
D-Comp.	30	70	50	0	393	321	82
E	40	60	200	60	273	205	75
F	40	60	200	40	357	292	82
G-Comp.	40	60	200	20	331	9	3

Particularly pertinent is Comparative Example G, which shows that when the elastomer particle content is below the presently-recited minimum of 30%, elongation at break after 10 days at 60°C is only 9%, according to the protocol described in the specification beginning at paragraph [0096]. The ratio of after/without thermal stress is only 3%, which value is arrived at by dividing the elongation at break after 10 days at 60°C (9) by the elongation at break without thermal stress (331). Compare to Examples E and F. Compare also to Comparative Examples C and D, which show that at a minimum film thickness, i.e., 50 μm, the presence or absence, respectively, of elastomer particles has no significant effect on the physical properties of the film, which physical properties are comparable to those achieved with the present invention at a minimum thickness of 150 μm.

Bonnet et al could not have predicted the above-discussed results.

Bonnet et al discloses a composition suitable as an adhesive layer coextrudable with polyvinylidene fluoride (PVDF) [0012] comprising 20 to 40 parts of PVDF, 40 to 60 parts of PMMA (methylmethacrylate homopolymers or methylmethacrylate copolymers with a copolymerizable monomer and also blends with an acrylate rubber [0010]), 5 to 18 parts of an acrylic elastomer, 1 to 4 parts of a UV absorber, the total making 100 parts an adhesive

layer [0013]-[0017]. Bonnet et al discloses further that the thickness of the PVDF layer is advantageously between 2 and 50 μm and that of the coextrudable composition between 10 and 100 μm [0063]. It is noted further that in all the coextruded films of the examples according to Bonnet et al's invention, the total thickness in each example is only 50 μm .

Thus, Bonnet et al does not disclose a film having the presently-recited minimum thickness, and thus does not recognize the significance of the elastomer particle content at such higher thicknesses.

New Claims 39 and 40 are separately patentable since the respective ranges recited therein are outside the corresponding ranges in Bonnet et al.

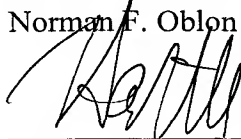
For all the above reasons, it is respectfully requested that this rejection be withdrawn.

The rejection of Claims 24-29 under 35 U.S.C. § 112, second paragraph, is respectfully traversed. Indeed, the rejection is now moot in view of the above-discussed amendment. Accordingly, it is respectfully requested that the rejection be withdrawn.

Applicants respectfully submit that all of the presently-pending claims in this application are now in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, L.L.P.
Norman F. Oblon



Harris A. Pitlick
Registration No. 38,779

Customer Number

22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 08/07)